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ABSTRACT

This report examines the features of computer information systems, differentiating between data files, search systems, and computer information organizations. An annotated listing is provided of those computer information retrieval files of interest to the music education researcher. This listing is divided into five categories: (1) music and music education, (2) education, (3) the sciences, (4) engineering and technology, and (5) special interest areas. Four alternative means for initiating a computer information search are suggested. (STS)

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COMPUTER INFORMATION SEARCH AND RETRIEVAL:

A GUIDE FOR THE MUSIC EDUCATOR

David Brian Williams

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COMPUTER INFORMATION SEARCH AND RETRIEVAL: A GUIDE FOR THE MUSIC EDUCATOR

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A review of the literature is an essential prerequisite to any research enterprise.[1] For the researcher in music education to attempt this task by present day standards, however, is to confront a burgeoning mass of information being generated at an ever increasing rate in professional journals, monographs, dissertations, and other modes of printed communication. This problem is all the more intensified when the nature of the research necessitates seeking information from fields outside of music; for example, education, psychology, sociology, acoustics, electronics, and linguistics. Fortunately, modern technology and the computer offer the researcher a mechanical tool for high-speed, systematic review of large quantities of published information.

At a meeting of the Doctoral Advisors Round Table, held in conjunction with the 1976 MENC Convention in Atlantic City, questions were raised concerning the availability of and access to computer information retrieval systems. Comments made at the meeting suggested that those who engage in, or supervise music research are not fully aware of the variety of high speed computer search and retrieval systems available to them. Specific questions raised were: What information retrieval systems are available? How does one get access to a particular system? What does it cost to use a system? What information does a system provide? This re-

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port examines the features of computer information systems and provides an annotative listing of pertinent information on computer retrieval data files. We trust this information will generate greater interest and more informed use of computer search and retrieval of published materials.

COMPUTER INFORMATION SYSTEMS

It is admittedly a mind-boggling task to decipher the network of computer retrieval systems which have been established in this country. The proliferation of acronyms to identify the various components of these systems does little to help. All of us in music education are familiar with ERIC, but what about PA, EC, SSCI, SCISEARCH, DARE, NTT/IB and many others? The picture becomes clearer if we make a distinction between computer information data files, computer information search systems, and computer information organizations.[2] Figure 1 illustrates how these components typically relate to form a computer information organization. As an example,

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Insert Figure 1 about here

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let us consider Lockheed Information Systems. Lockheed is one of the largest commercial, computer information organizations in the nation. Lockheed uses DIALOG as its on-line computer software to search and retrieve information from a large number of data files residing on its system. Each data file specializes in a specific type of information. Among its many files, Lockheed has CIJE (Current Index to Journals in Education), RIE (Resources in Education), PA (Psychological Abstracts), SCISEARCH (Science Citation Index), and SOCIAL SCISEARCH (Social Science Citation Index).

There are some 120 computer information retrieval organizations in the United States. Some are privately operated, others are sponsored by institutions of higher education, state consortiums, school districts, and various federal agencies. SMERC (San Mateo Education Resource Center) is a computer information organization sponsored by the San Mateo, California County Office of Education. GIDC (Georgia Information Dissemination Center) is sponsored by the University of Georgia, ERICSEARCH is sponsored by the University of Minnesota, and SDC is sponsored by the System Development Corporation.

There are several varieties of on-line search systems. DIALOG, developed by Lockheed; ORBIT, developed by the System Development Corporation; and STAIRS, developed by IBM; are search systems commonly used by computer information organizations to retrieve information from data files. There are also off-line (batch) search systems such as TEXT-PAC, developed by IBM; GIPSY, developed by the University of Oklahoma; IPS, developed by the University of California, Los Angeles; QUERY, PROSE, and others.

Approximately thirty or more independent concerns are developing data files, each specializing in a particular area of information. The National Institute of Education sponsors the ERIC files, University Microfilms produces the DAI file, the American Psychological Association the PA file, and the National Technical Information Service compiles information for the NTIS file. The New York Times has a file (NYTI/IB) which indexes not only the New York Times, but items of interest from other newspapers and general and special interest magazines.

Of the various components of computer information systems, you,

as a music education researcher, are perhaps most interested in the nature of data files available. The search system software is not of particular interest, though it may ultimately affect the performance you receive from a retrieval organization. The organization is only of interest after you have decided what data files most likely contain information related to your research interests. Hence, an annotative listing of computer data files was compiled for this review, data files we felt offered enough variety to meet the needs of most researchers, and students of research in music education.

Computer information organizations will be considered only as they provide a direct means of access to a particular data file. As you will observe when you examine the annotative listing, some concerns which produce data files provide their own search and retrieval service. Others do not provide retrieval service and you must locate a computer information organization which subscribes to that particular data file. As cases in point, DATRIX II is a file-retrieval system developed by Xerox University Microfilms. A researcher can contact University Microfilms directly for a search of the Dissertation Abstracts International file. A search of ERIC, on the other hand, can only be performed through a computer organization which has incorporated the ERIC files into its system.

COMPUTER INFORMATION DATA FILES

The computer information data files collated for the annotative listing fall into five convenient categories: music and music education, education, the sciences, engineering and technology, and special interest areas.

Music and music education. The one major attempt to develop a computer information data file for music education is the Materials of Music (MOM) file at the University of Georgia. This file is not currently available for use. Hopefully, with renewed funding, the file will be activated. RILM (Répertoire International de Littérature Musicale), a hard-copy indexing system, has plans to offer an on-line computer search capability by late 1977. Of several major music education publications, the Music Educators Journal is indexed on the CIJE (Current Index to Journals in Education) file and the Journal of Research in Music Education is indexed on several files: CIJE,[3] PA (Psychological Abstracts), and SOCIAL SCISEARCH (Social Science Citation Index). We were not able to locate a file which indexed the CMME Bulletin or the British publication, Psychology of Music. Reports from government sponsored music education projects are indexed on the RIE (Resources in Education) file. Music dissertations recorded in Dissertation Abstracts International (DAI) are indexed on the DATRIX II data base compiled by University Microfilms.

Education. The primary education data base is ERIC (Educational Resources Information Center). ERIC consists of the CIJE file which provides data from current education journals and the RIE file which provides data from various research reports, evaluation studies, curriculum guides, theses, and many other educational projects. ERIC also has a series of Clearinghouses which compile information on special interest topics in education. Each Clearinghouse supplies selected information to ERIC. However, should you need the latest information in a special interest area, or more comprehensive information, the Clearinghouses may be contacted

directly. For example, there are ERIC Clearinghouses on early childhood education (University of Illinois), educational management (University of Oregon), information resources (Stanford University), teacher education (American Association of Colleges for Teacher Education), and tests, measurement, and evaluation (Educational Testing Service). The EC (Exceptional Child) data file is compiled by the Council for Exceptional Children which also services ERIC as a Clearinghouse.

AIM/ARM (Abstracts of Institutional Materials/Abstracts of Research Materials in Vocational and Technical Education) and NICEM (National Center for Educational Media) are two useful educational computer data files. NICEM specializes in computer indexing of nonbook educational materials.

The sciences. The most extensive information service for the sciences is ISI (Institute for Scientific Information). ISI produces two well-known, hard-copy information indexes: Science Citation Index (SCI) and Social Science Citation Index(SSCI). Both indexes are available as SCISEARCH and SOCIAL SCISEARCH computer search and retrieval files. SCI contains some 2600 international journals in the natural and physical sciences. SSCI contains information from some 1300 social science journals including information on educational and psychological research publications. The JRME publication is indexed in SSCI.

ISI uses a unique retrieval procedure known as "citation indexing." You can search for information by using authors' cited references. Merely select a landmark article from your area of interest and then retrieve from the ISI data files any later article which included that reference

in its bibliography. ISI also offers ASCA (Automatic Subject Citation Alert). By subscribing to the ASCA service, you will receive a weekly report giving references listing all of the week's publications--drawn from approximately 5000 international journals--related to your individual profile of research interests. All of the standard psychological and educational journals are included. A sample of possible journals of interest to music education research are the Journal of Aesthetic Education, Perception and Psychophysics, Journal of Research in Music Education, Journal of Social Psychology, Journal of the Acoustical Society of America, and the Journal of Educational Psychology. When you enroll in the ASCA service you construct an individual profile of research interests which is then used in selecting publications for your tailored weekly report. (A less expensive service is ASCATOPICS which provides a weekly report based on topics you select from an ISI prepared list.)

After receiving your weekly listing from ASCA, you can either use an ASCA postcard to request a reprint of an article listed, or use their OATS service (Original Article Tear Sheet) to obtain a copy of any article within 24 hours. The approximate cost is $3.50 per request within the United States at the time of this writing. Foreign articles can also be obtained at additional cost.

Psychological Abstracts (PA) is a commonly used reference tool. The Psychological Abstracts Information Service compiles a computer index file based on PA and provides a search and retrieval system for the PA file (PASAR). Through Lockheed Information Service they also provide direct access terminals to the PA file (PADAT).

An international data file (DARE) of information from the social sciences and humanities is being developed by UNESCO. Their files will eventually include cross-reference indexing of information on international institutions and professional groups, specialists, field and empirical research projects, and research documents produced by these institutions and specialists.

For information on unclassified, publicly available reports from various government agencies (e.g., NASA, HEW, Department of Commerce, USOE), the National Technical Information Service (NTIS) offers a computer data file and a search and retrieval service (NTISearch). You are likely to find quite a variety of documents from NTIS. A recent catalog showed reports on such topics as bandpass filters, speech recognition by computer, and psycholinguistics. The Smithsonian Science Information Exchange (SSIE) has a computer data file on notices of research projects (NRPs). It is a useful computer index for locating current, ongoing research projects in all of the sciences, i.e., behavioral, medical and biological, and physical sciences, for example.

Technology. If your interests are in the area of electromechanical instrumentation, audio technology, and computers, INSPEC (Information Services in Physics, Electrotechnology, and Computers and Control) indexes information from Science Abstracts. This includes information on patents. EI (Engineering Index), also known as COMPENDEX, indexes information from engineering publications. Topics that may interest music researchers are electrical engineering, electronics and communications, computers and data processing, and sound and acoustical technology.

Special interest. The PREDICASTS data file indexes information on product marketing. Data is compiled from newspapers, business magazines, government reports, and trade journals on recent developments in technology, government regulations, new products, and environmental controls. Information from major newspapers, and special and general interest magazines can be retrieved from the New York Times Information Bank (NYT/IB). A sample of periodicals indexed are the Atlantic Monthly, New Yorker, New York Times Review of Books, Psychology Today, and the London Sunday Times. The New York Times is indexed from 1969.

ANNOTATIVE LISTING OF COMPUTER INFORMATION FILES

The following annotative listing of computer information files represents a first attempt to bring together information on types of files available to those engaged in music education research. Our data was based on brochures provided by various computer information concerns, notices and articles in professional and trade journals, correspondence, and phone conversations. Our objective was to quantify the information; no attempt was made to evaluate the effectiveness or reliability of any data file. The information gathered was codified to identify the distributor, the nature of the data base, origin or starting date of the data base, type of output the data base provides, cost of accessing the file, turnaround time, and how to go about ordering a search.

ASCA (Automatic Subject Citation Alert)

Distributor: Institute for Scientific Information, 325 Chestnut St. Philadelphia, PA 19106, Phone (215) 923-3300

Nature of Data Base: Approximately 5000 international journals in the physical, behavioral, and social sciences which are scanned weekly. All of the standard education and psychology journals including JRME.

Origin of Data Base: The current week.

Output: A weekly report giving citation references listing all of the publications for that week which are related to your individual profile of research interests. If you wish, you can request a copy of any article of interest noted in the ASCA report through ISI's CATS (Original Article Tear Sheet) service. The article will be delivered within 24 hours. Cost is $3.50 per request within the United States.

Cost: Yearly rates start at $115 for 52 weeks depending upon the complexity of your research profile. ASCA was offering a $39, 13 week, introductory offer. A less expensive system is the ASCATOPICS which develops your weekly report on the basis of selected topics rather than a personal profile.

Turnaround: Weekly

To order search: Subscribe to the ASCA weekly service. Each subscriber answers a questionnaire designed to tailor the weekly ASCA report to his particular research interests.

ATI/ARM (Abstracts of Instructional Materials/Abstracts of Research Materials in Vocational and Technical Education)

Distributor: Center for Vocational and Technical Education, The Ohio State University, 1960 Kenny Road, Columbus, Ohio 43210

Nature of Data Base: Instructional materials in vocational and technical education developed by local school districts, state departments of education, curriculum development laboratories, and industrial organizations; also includes research materials from USOE, Department of Labor, CED, private foundations and other organizations.

Origin of Data Base: 1971

Output: The Center for Vocational and Technical Education prints a bimonthly, hard-copy index; customized, on-line search of data file available through Lockheed Information Systems. Output consists of reference citation plus an abstract.

Cost: Lockheed lists search rate at $45 per hour plus $.10 per abstract listing.

Turnaround: Three days from Lockheed.

To order search: Contact Lockheed either by mail or through a Lockheed direct access terminal.

COMPENDEX or EI (Engineering Index)

Distributor: Engineering Index, Inc. 345 East 47th Street, New York, NY 10017

Nature of Data Base: Publications from engineering societies and organizations. Subject headings related to music research are electrical engineering, electronics and communications, computers and data processing, sound and acoustical technology.

Origin of Data Base: 1972

Output: Citations plus abstracts

Cost: Lockheed Information System estimate is $65 per hour, plus $.10 per abstract listing.

Turnaround: Three days from Lockheed.

To order search: No information on whether search can be ordered through Engineering Index, Inc. EI file is on both the Lockheed and SDC information systems.

DARE (UNESCO Computerized Data Retrieval System in the Social Sciences and Humanities)

Distributor: UNESCO, Division of Scientific Documentation and Information, 7, Place de Fontenoy, 75700, Paris, France.

Nature of Data Base: When the entire system is operational, the DARE files will contain four types of information from the social and human sciences: (1) institutions and professional groups, (2) specialists, (3) field and empirical research projects, and (4) research documents from institutions and specialists.

Origin of Data Base: Not specified.

Output: Citation listings

Cost: Service to "Member States" and cooperating institutions remains free of charge.

To order search: Mail request to the Documentation Center. Information provided from DARE suggests that the staff is not ready to accept a great deal of mail requests and that they will be handled on a "when they can" basis. On-line search can be performed by the user at the DARE Center.

DAI (Dissertation Abstracts International)
DATRIX II (Xerox University Microfilms)

Distributor: University Microfilms, 300 North Zeeb Road, Ann Arbor, Michigan 48106

Nature of Data Base: All dissertations which are listed in Dissertation Abstracts International.

Origin of Data Base: 1861

Output: Biographical listing of dissertations (in standard University Microfilm format) related to keywords supplied.

Cost: $15 for up to 150 references, $.10 for each additional reference.

Turnaround: One week not including mailing.

To order search: Send in a standard University Microfilms order form. A keyword list is provided for user to select from; user can specify specific universities and specific dates for the search. User is also requested to provide an "explicit summary of research goal."

EC (Exceptional Children Abstracts)

Distributor: The Council for Exceptional Children, 1920 Association Drive, Reston, Virginia 22091 (800) 336-3728

Nature of Data Base: Indexing of literature dealing with education of handicapped and gifted children. File includes research and instructional information from such journals as Education and Training of the Mentally Retarded, Exceptional Child, Journal of Learning Disabilities, Journal of Special Education, and Journal of Speech and Hearing Research.

Origin of Data Base: 1966

Output: Citations with abstracts retrieved on the basis of a description of your research problem.

Cost: For non-members, $25 for up to 100 citations; $5 for each additional 50 citations thereafter.

Turnaround: Two weeks from receipt of order.

To order search: Call toll free number above or use order forms available on request. An information specialist will discuss your search profile with you, or you can write a brief problem statement on the order form.

Note: Approximately 45% of the EC information goes into the ERIC files.

ERIC (Educational Resources Information Center)

A. CIJE (Current Index to Journals in Education)

Distributor: Macmillan Information, A Division of Macmillan Publishing Co., Inc. 2000 Brown Street, Riverside, New Jersey 08075

Nature of Data Base: File covers over 700 major journals devoted to all areas of education including JIME and MEJ.

B. RIE (Resources in Education)

Distributor: National Institute of Education, Washington, D. C. 20208

Nature of Data Base: File contains case studies, bibliographies, surveys, government reports, curriculum guides, program descriptions and evaluations, instructional materials, and various other printed educational materials.

Origin of Data Bases: 1966

Output: Citation, abstract retrieved on ERIC descriptors.

Cost: Varies widely depending upon computer organization requesting search. A search through Lockheed Information Systems would cost $25 per hour, plus $.30 per citation with abstract.

Turnaround: Variable.

To order search: User must locate a computer organization subscribing to the ERIC files. ERIC provides a brochure listing installations internationally which subscribe to the file (Survey of ERIC Data Base Search Services). There are 120 plus organizations in this country which have the ERIC files. ERIC descriptors are used to order search.

Notes: ERIC has a network of Clearinghouses which process the most relevant information in their particular areas and submit the information to RIE and CIJE. However, the Clearinghouses may be able to provide more comprehensive and up-to-date information than ERIC. They are as follows:

Career Education (Northern Illinois University, Dekalb), Counseling and Personnel Services (University of Michigan), Disadvantaged (Columbia University, Teachers College), Early Childhood Education (University of Illinois), Educational Management (University of Oregon), Handicapped and Gifted Children (Council for Exceptional Children, Reston, Va.), Higher Education (George Washington University), Information Resources (Stanford University), Junior Colleges (University of California, Los Angeles), Languages and Linguistics (Center for Applied Linguistics, Arlington, Va.), Reading and Communication Skills (National Council of Teachers of English, Urbana, Illinois), Rural Education and Small Schools (New Mexico State University, Las Cruces), Science, Mathematics, and Environmental Education (The Ohio State University), Social Studies/ Social Science Education (855 Broadway, Boulder, Colorado), Teacher Education (American Association of Colleges for Teacher Education, Washington, D. C.), Tests, Measurement, and Evaluation (Educational Testing Service).

INSPEC (Information Services in Physics, Electrotechnology, and Computers and Control)

Distributor: The Institution of Electrical Engineers, Savoy Place, London WC2R 0BL, England

Nature of Data Base: File contains information taken from Science Abstracts. Abstracts from journals, conference proceedings, technical reports, books, theses, etc. in the fields of physics, electrotechnology, computers and control. Includes coverage of patents.

Origin of Data Base: 1969

Output: Citations and abstracts

Cost: From Lockheed Information Systems, $65 per hour, plus $.10 per citation and abstract listing.

Turnaround: Three days from Lockheed.

To order search: File available only from Lockheed Information Systems. Contact Lockheed by mail or locate a Lockheed direct access terminal.

MUSI (Materials of Music)

Distributor: Georgia Information Dissemination Center (GIDC), University of Georgia, Office of Computing Activities, Athens, Georgia. Phone (404) 542-3106

Notes: Due to lack of funding this file is inactive. No information is available as to the current status of the MUSI project.

NICEM (National Center for Educational Media)

Distributor: University of Southern California, University Park, Los Angeles, Ca. 90007 Phone (213) 746-6681

Nature of Data Base: File contains information of nonbook educational media: 16mm films, 35mm filmstrips, overhead transparencies, video tapes, audio tapes, phono-records, 8mm motion picture cartridges, slides, and slide sets.

Origin of Data Base: 1966

Output, cost, and turnaround: No information

To order search: It appears that the data base can only be accessed presently by institutions requesting a customized search.

NTISearch (National Technical Information Search)

Distributor: National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Va. 22161 Phone (703) 321-8543.

Nature of Data Base: File contains unclassified, publicly available, limited distribution reports from government agencies. Sample of topics include administration; behavior and society; communication; computer, control, and information theory; library and information sciences, as well as all areas of physical science.

Origin of Data Base: 1964

Output: Citations and abstracts. Hard-copy of the cited report can also be obtained. NTIS prints a number of pre-retrieved Published Searches (1000 available) on selected topics.

Cost: $100 for a customized on-line NTISearch of up to 100 technical report summaries; $25 per copy of a Published Search.

Turnaround: Three to five weeks. Special rush service available with 24 hour delivery for a $10 extra charge.

To order search: Call NTISearch, (703) 321-9040

NYT/IB (New York Times Information Bank)

Distributor: New York Times, 229 West 43rd Street, New York, NY 10036, Phone (212) 556-1111

Nature of Data Base: The file contains the New York Times daily

and Sunday editions, other national and international newspapers, and articles from general and special purpose journals. Included are "significant news items, interpretive articles, and articles of opinion and commentary originating with or exclusive to the source periodicals." Currently, however, the file does not contain "reviews of book, theatrical, musical and other cultural events or works unless major essays of general significance."

Origin of Data Base: The New York Times back to 1969; other sources back to 1972 or 1973.

Output: Citations and abstracts

Cost: $45 to $50 per hour on-line.

Turnaround: Immediate on direct access terminal.

To order search: User must locate a university or public library that is connected to the Information Bank.

PA (Psychological Abstracts)
PASAR (Psychological Abstracts Search and Retrieval)

Distributor: Psychological Abstracts Information Services, American Psychological Association, 1200 17th Street, N.W., Washington, D. C. 20036, Phone (202) 833-7626

Nature of Data Base: The file contains the contents of Psychological Abstracts which is the major indexing guide to journals of psychological research. The file contains JRME. Major categories of the file include: history and philosophy of psychology, psychometrics and statistics, perception and motor performance, cognitive processes and motivation, neurology and physiology, psychopharmacology, animal psychology, developmental psychology, cultural influences and social issues, social behavior and interpersonal processes, communication and language, personality, professional personnel, physical and psychological disorders, treatment and prevention, educational psychology, and applied psychology.

Origin of Data Base: 1967

Output: Citations and abstracts similar to listings in Psychological Abstracts.

Cost: When ordered direct from PAIS, the average run is $40 to $80. The requester is contacted before a run exceeds $100.

Turnaround: No estimate available.

To order search: Mail in a PASAR request form which can be obtained from PAIS. The form will request information about the dependent and independent variables of interest, organismic variables of interest, publication dates of interest, and a brief description of your search topic. The user can also locate a direct access terminal to the Lockheed Information Systems and use the PADAT (PA Direct Access Terminal) service.

PREDICASTS Market Abstracts

Distributor: Predicasts, Inc. 200 University Circle Research Center, Cleveland, Ohio 44106

Nature of Data Base: Abstracts from newspapers, business magazines, government reports, trade journals, bank letters, and special reports internationally on such information as technology, government regulations, new products, environmental issues, and marketing data. This includes information on such products and services as electronic equipment, instruments and related products, printing and publishing.

Origin of Data Base: 1972

Output: Abstracts and citations

Cost: From Lockheed Information Systems, $90 per hour and $.20 per abstract-citation listing.

Turnaround: Three days

To order search: File is available exclusively from Lockheed Information Systems. Contact Lockheed by mail or locate a Lockheed direct access terminal.

RILM (Répertoire International de Littérature Musicale)

Distributor: International RILM Center, The City University of New York, 33 West 42nd Street, New York, NY 10036, Phone (212) 790-4214.

Nature of Data Base: Abstracts of books, articles, essays, reviews, dissertations, catalogues, etc., related to all aspects of musicology.

Origin of Data Base: 1967

Note: At present RILM is a hard-copy indexing system produced by

computer. NILM is planning to offer on-line search and retrieval of their data base by late 1977.

SCI (Science Citation Index)
SCISEARCH (Science Search)

Distributor: Institute for Scientific Information, 325 Chestnut Street, Philadelphia, PA 19106, Phone (215) 923-3300

Nature of Data Base: Information from some 2600 international journals in the natural, physical, and biomedical sciences. SCISEARCH is a computer search and retrieval file of information indexed in the hard-copy, Science Citation Index. General areas covered are: agricultural, biological and environmental sciences; engineering technology, and applied sciences, medical and life sciences, physical and chemical sciences, and behavioral sciences.

Origin of Data Base: SCISEARCH contains the most recent two and one-half years of information in Science Citation Index.

Output: Citation only with author, journal, full title, language indicator, ISI order number for reprints, and authors mailing address.

Cost: On Lockheed terminal, $70 per hour, plus $.10 per citation.

Turnaround: Three days from Lockheed

To order search: SCISEARCH is available from Lockheed Information Services. Contact Lockheed by mail or locate a Lockheed direct access terminal. ISI can be contacted directly for custom search; no cost estimate available.

Notes: SCISEARCH offers citation searching. By selecting a landmark article from your area of research interest, you can retrieve all publications which have included that citation in the bibliography.

SSCI (Social Science Citation Index)
SOCIAL SCISEARCH (Social Science Search)

Distributor: Institute for Scientific Information, 325 Chestnut Street, Philadelphia, PA 19106, Phone (215) 923-3300

Nature of Data Base: Information from some 1300 social science journals and social science items drawn from over 1200 natural, physical, and biomedical science journals. SOCIAL SCISEARCH is a computer search and retrieval file of infor-

mation indexed in the hard-copy, Social Science Citation Index. Information is included on educational research, ethnic group studies, history, information science, linguistics, statistics, psychology, as well as all aspects of the social sciences. The JRME is indexed on the file.

Origin of Data Base: SOCIAL SCISEARCH contains the most recent five years of information in Social Science Index.

Output: Citations similar to SCISEARCH.

Cost: On Lockheed terminal, $70 per hour, plus $.10 per citation.

Turnaround: Three days from Lockheed.

To order search: SOCIAL SCISEARCH is available only from Lockheed Information Systems. Either mail a request to Lockheed or locate a Lockheed direct access terminal. ISI can be contacted directly for a special custom search; no cost estimate available.

Notes: SOCIAL SCISEARCH offers citation searching. By selecting a landmark article from your area of research interest, you can retrieve all publications which have included that citation in the bibliography.

SSIE (Smithsonian Science Information Exchange)

Distributor: Smithsonian Institution, Room 300, 1730 M Street, N.W. Washington, D. C. 20036, Phone (202) 381-6211

Nature of Data Base: Reports on ongoing research in physics, mathematics, electronics, engineering; medical and biological sciences, and behavioral sciences being conducted by government sponsored agencies and government funded projects. This data base is designed to "complement other scientific and technical information services available . . . by supplying information about ongoing research." Sample types of information for music research include: acoustics, computer science, electronics, statistics, cognitive processes, education and training, evaluation and measurement, and sensory and perceptual processes.

Origin of Data Base: July, 1974

Output: Smithsonian designed NRPs (Notice of Research Project) which provides the essential information on a given project plus a 200 word abstract.

Cost: $60 for a search to include up to 50 NRPs; $.25 for each additional NRP.

Turnaround: Three to five days.

To order search: Write or phone Smithsonian Institute, or locate a direct access terminal available through the System Development Corporation.

Conducting a Computer Information Search

Consider now the various modes of access a researcher has to any one of these files. To simplify the process, we offer four alternatives: First, where possible, contact the distributor of a data file directly. Files which offer their own search and retrieval service are ASCA, DARE, DATRIX II, EC, all ERIC Clearinghouses, NICEM, NTISearch, PASAR, RJLM, and SSIE. Second, utilize the services of Lockheed Information Systems or the System Development Corporation, computer organizations offering a wide variety of data files. Lockheed has ERIC, EC, NTIS, SCISEARCH, SOCIAL SCISEARCH, COMPENDEX, AEI/ARM, PAIS, INSPEC, and EXCERPTA data files. Lockheed has exclusive on-line access to some files. To order a search from Lockheed, contact one of their regional offices by mail, phone, or walk-in. (3251 Hanover Street, Palo Alto, CA 94304, Phone 415-424-3600; 900 17th Street NW, Washington, D. C. 20006, Phone 202-833-5921; or 200 Park Ave., Suite 3003, New York, NY 10017, Phone 212-682-4930.) There was also a number of direct access terminals to the Lockheed files located at various universities: a partial list includes Stanford, University of Denver, Governors State University, Harvard, University of Minnesota, Columbia University, and University of Pennsylvania.

The System Development Corporation has the ERIC, CIJE, RDC, SCI, and SSCI files, to name only a few. You can mail or telephone a search request (SDC Search Service, 2500 Colorado Ave., Santa Monica, CA 90406, Phone 213-393-9411, Ext. 7277 or 7313). SDC files are also on the computer systems of the University of Delaware, Michigan State University, Kent State University, and the University of Washington. For specific information on

the location of a convenient direct access terminal for your use, contact Lockheed or SDC.

Third, if you are primarily interested in the ERIC files, write to ERIC (4833 Rugby Ave., Suite 303, Bethesda, Maryland 20014) for a copy of their brochure, Survey of ERIC Data Base Search Services. This brochure lists all computer organizations subscribing to the ERIC data base, and also indicates other files an organization may have on its system. Fourth, contact the computer facility nearest you and determine what files they offer. They may have a cooperative agreement with another facility. Many computer organizations subscribe selectively to certain data files. Consider also the actual extent of your requirements. Even though they do not offer as great a range of files as Lockheed, the ERIC and PA files, for example, may adequately suit your needs.

Final Comments

Two comments in closing. As noted earlier, this report was envisioned as a first effort at collecting information on computer information search and retrieval which may be of interest to music educators. In order to refine this information in the future, it is important that we begin to tabulate data on the performance of these various files and the organizations through which they were searched. We inyire you to send us evaluative data as you use various files in your own work. Our future plans are to publish an update of this information incorporating user data provided by music educators.

From this survey, the one obviousity is that music education is in need of a retrieval source which covers more music education literature

than MEJ and JRME. Activating the MUSE file at the University of Georgia is one possible solution. Another is to contact specific data file concerns, e.g., PA, ERIC, or SOCIAL SCISEARCH, and request that appropriate music publications be added to their indexing. With sufficient response from music researchers for one of these alternatives, the writers would be willing to approach the Music Educators National Conference and the Music Education Research Council and solicit their cooperation and support in seeking avenues for expanding the computer search capability of music education materials.

FOOTNOTES

[1]Part of the work upon which this publication was based was performed pursuant to Contract NE-C-00-3-0064 with the National Institute of Education, Department of Health, Education, and Welfare. The first author wishes to acknowledge Illinois State University for providing research time for the completion of this project. Also, appreciation is extended to Donald S. Mayo for his editorial assistance.

[2]The basis for organizing much of the material presented in this article comes from a useful pamphlet published by the Educational Resources Information Center (ERIC), National Institute of Education, entitled Survey of ERIC Data Base Search Services.

[3]Acronyms for data files will be identified the first time they are used. The reader may wish to refer ahead to the annotative listing should a question arise concerning a subsequent use of an acronym.

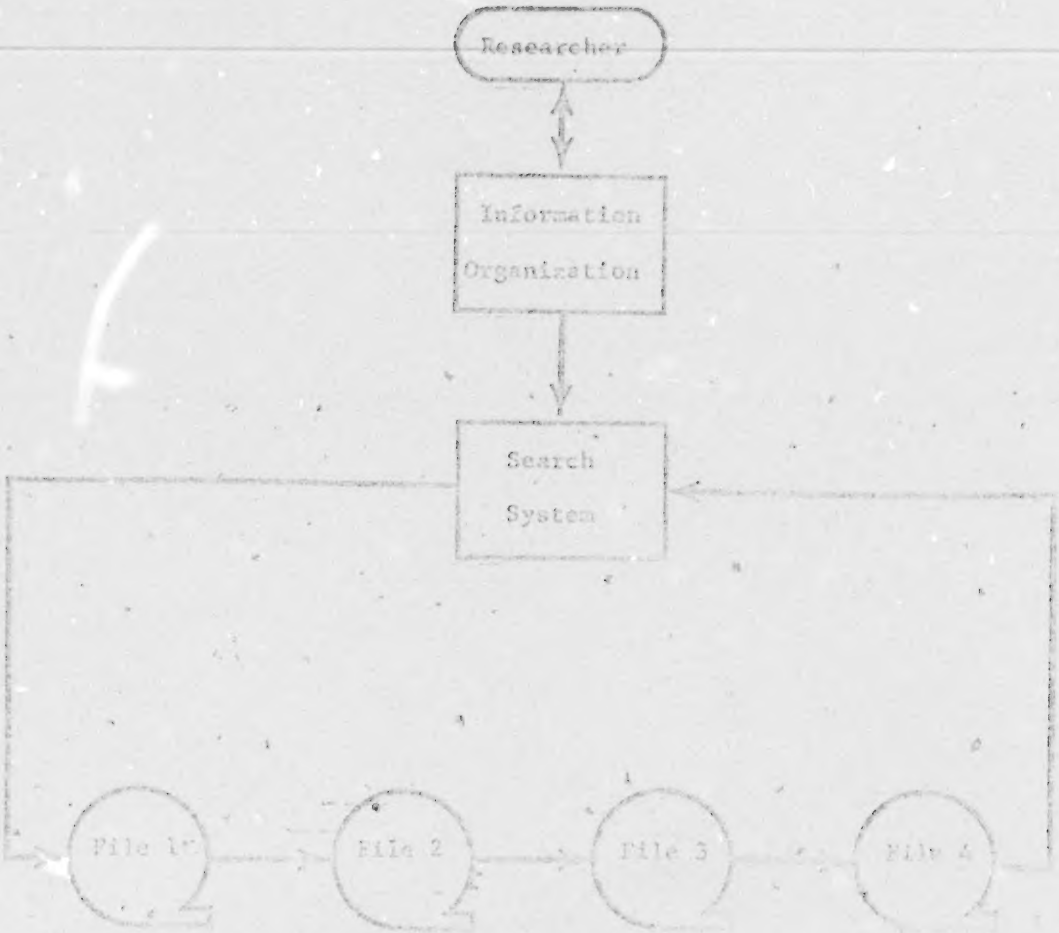

Figure 1: The Components of a Computer Information Search and Retrieval System